1. Record Nr.   UNINA9910254089503321

   Autore   Stoyan Gisbert

   Titolo   Elementary Numerical Mathematics for Programmers and Engineers / / by Gisbert Stoyan, Agnes Baran

   Pubbl/distr/stampa Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2016

   ISBN   3-319-44660-6

   Edizione   [1st ed. 2016.]

   Descrizione fisica 1 online resource (IX, 220 p. 27 illus., 10 illus. in color.)

   Collana   Compact Textbooks in Mathematics, , 2296-4568

   Disciplina   518

   Soggetti   Numerical analysis
                       Algorithms
                       Computer science - Mathematics
                       Numerical Analysis
                       Computational Science and Engineering

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Nota di contenuto   Floating point arithmetic -- Norms, condition numbers -- Solution of systems of linear equations -- The least squares problem -- Eigenvalue problems -- Interpolation -- Nonlinear equations and systems -- Numerical integration -- Ordinary differential equations -- Practical error estimation -- Bibliography -- Index.

   Sommario/riassunto This book covers the basics of numerical methods, while avoiding the definition-theorem-proof style and instead focusing on numerical examples and simple pseudo-codes. The book is divided into ten chapters. Starting with floating number calculations and continuing up to ordinary differential equations, including "Euler backwards". The final chapter discusses practical error estimations. Exercises (including several in MATLAB) are provided at the end of each chapter. Suitable for readers with minimal mathematical knowledge, the book not only offers an elementary introduction to numerical mathematics for programmers and engineers but also provides supporting material for students and teachers of mathematics.